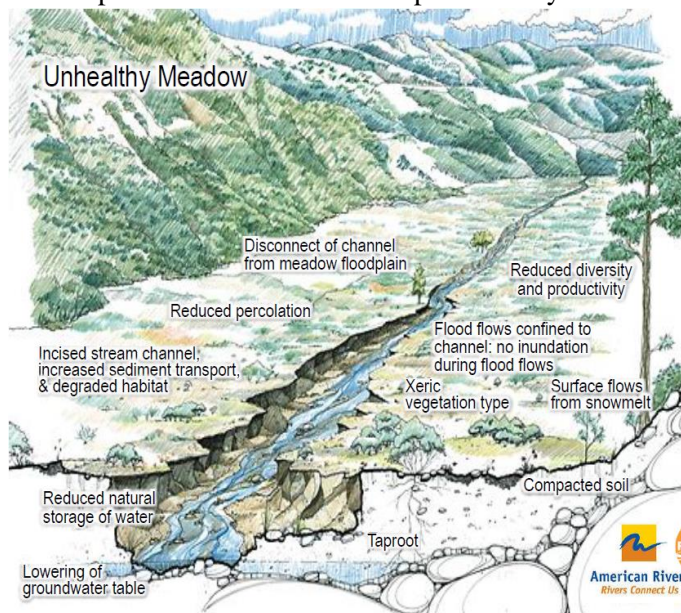


Wet Meadow Restoration

Upland meadows on the Malheur National Forest are naturally dry due to their position on the landscape. Other meadows are adjacent to streams, often along the historical floodplain. A functioning floodplain allows water to be stored along it during high flows, providing the moisture and nutrients riparian ecosystems need to thrive.

However, when streams are incised (constrained in an eroded single channel and unable to access the surrounding floodplain) water drains out of this system at an accelerated rate, causing the water table to drop and adjacent meadows to dry out and function more like upland meadows than wet riparian ecosystems.

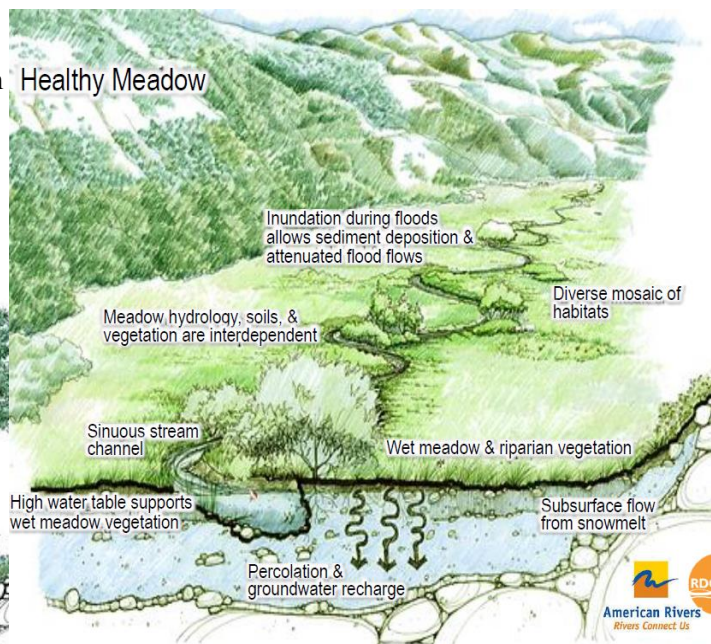


Incised streams also have high flows that are faster and more forceful, eroding river banks and carrying away soils that maintain floodplain function. Riparian functions like water storage are reduced, riparian ecosystems are impaired, and opportunities for natural recovery diminished.

Photo: Courtesy of American Rivers: Unhealthy meadow system, representative of many across the Malheur National Forest.

Healthy Meadows

Restoring riparian meadows across the Malheur National Forest is one focus of the Aquatic Restoration Project, since healthy riparian meadows provide rich biodiversity in the form of unique plants and biological communities. These in turn fuel important food webs for fish, birds, and terrestrial wildlife.



In dry, arid landscapes especially, meadows become important biodiversity hot spots, critical for the survival of many plant and wildlife species across our region.

Some important pollinator species, such as the regionally sensitive silver bordered fritillary and western bumblebee, thrive on the abundance of wildflowers across healthy riparian meadows.

Photo: Courtesy of American Rivers: Healthy meadow system, where water is being stored across the floodplain for groundwater recharge or use by riparian plant communities.

Floodplain Reconnection

With a focus on restoring the connection of the stream to its surrounding floodplain, the Forest uses a variety of tactics to achieve results, from removing boulders and berms that impede a stream's ability to spill its banks or change direction (stream sinuosity, or meandering), to adding large wood such as log jams or structures that mimic beaver dams in order to raise water tables and force water out into the floodplain.



Photo: In August, 2016 the Camp Creek meadow was dry. As part of restoration work, placement of large wood and other structures in the stream had just begun. (Arrows denote reference trees.)



Photo: In August, 2017 the same Camp Creek meadow is still green, due to floodplain reconnection.

Purpose and Need:

The purpose of the Aquatic Restoration Project is to maintain or enhance watershed health, species recovery, and diversity on the Malheur National Forest. The 2014 Aquatic Restoration Decision authorized 17 categories of aquatic restoration activities that will aid in the recovery of aquatic species and impaired water bodies.



Photos: (Top) Tall grass growing in Camp Creek meadow in August, one year after restoration (restored 2016).(Bottom) Several species, including silver bordered fritillary; need wet meadows with abundant wildflowers as their habitat.(photo taken on Malheur National Forest in 2016.)



For More Information See:

Aquatic Restoration Project Environmental Assessment and Decision Notice:

<http://www.fs.usda.gov/detail/malheur/landmanagement/projects/?cid=stelprd3817723>

The Aquatic Restoration Project facilitates the completion of projects across the Forest to benefit fish species listed as “threatened” under the Endangered Species Act, and to improve water quality.

The website above is designed to provide information about aquatic restoration activities on the Malheur National Forest, and will provide an annual list of projects planned, as well as an accomplishments section about completed projects.

The list and description of projects to be implemented each fiscal year will be posted on this website as available, and at least 30 days prior to planned implementation.

Project implementation checklists will be used on each project to ensure all activities are consistent with the Malheur Forest Plan and project design criteria associated with the Aquatic Restoration Project decision.

Watch for future brochures that highlight more aquatic restoration activities.

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United States Department of Agriculture

Aquatic Restoration

Meadow Restoration on the Malheur National Forest



How wetter meadows help restore riparian communities, processes, and functions on our landscape



08-07-2017

for the greatest good